

Anthrax

Information for Livestock Producers and Allied Industries

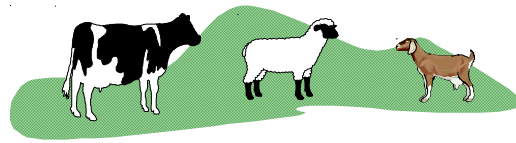
Introduction - Anthrax is a potentially fatal disease of virtually all warm-blooded animals, including humans. It is caused by a spore-forming bacterium, *Bacillus anthracis*.

Cause – The anthrax bacterium is found in the vegetative and the spore form. The vegetative form is the growing, reproducing form found in infected animals and is the state that produces toxins that cause the disease anthrax. When vegetative cells escape the body and are exposed to oxygen, they form spores. Anthrax spores live for years in the environment, and they are highly resistant to heat, cold, chemical disinfectants, and long dry periods.

"If you find an animal carcass that has not undergone rigor mortis and you suspect anthrax, take appropriate precautions and call your veterinarian, or animal health officials."

Anthrax does not easily spread by direct contact between animals. Animals are usually infected by ingestion of the soil-borne anthrax spores which then revert to the vegetative form, reproducing within the infected animal. Spores can be picked up directly from soil through grazing or from feed grown on infected soil. When periods of drought cause animals to graze closer to the ground, animals may be more likely to ingest spores. Flooding and working the land are also associated with an increased risk of spore ingestion. Although rare, it is possible for animals to inhale dust harboring anthrax spores. They may also develop a localized infection through breaks in the skin.

Clinical Signs – Ruminants such as cattle and sheep are most susceptible to anthrax, and are most commonly affected, followed by horses and



then swine. In ruminants, the disease is most commonly characterized by sudden death. If detected immediately, clinical signs include fever, muscle tremors, respiratory distress, and convulsions. After death, there may be a bloody discharge from body orifices, rapid bloating and, notably, a lack of rigor mortis. If horses ingest spores, they usually show signs of colic, enteritis and fever. If anthrax is introduced through a break in the skin, localized swelling at the introduction site and generalized swelling at the neck and chest are common.

Treatment - *B. anthracis* is susceptible to a number of antibiotics including penicillin and oxytetracycline. Because of the rapid course of the disease, these antibiotics must be given immediately when infection is diagnosed.

Control and Prevention – Because of the human health risk and the highly resistant spore-forming potential of anthrax bacteria exposed to oxygen, when anthrax is suspected, *do not open dead animals for routine examination*. A veterinarian can confirm anthrax by taking a blood sample from a peripheral vein and submitting it to the California Animal Health and Food Safety Laboratory. All suspected cases of anthrax must be reported to the California Department of Food and Agriculture or the US Department of Agriculture. Quarantine of the area may be necessary to prevent further spread of disease. Consult your local county officials prior to disposing of animals which died from anthrax.

Zoonotic Potential – Anthrax may cause serious disease in humans as well as animals. If you find an animal carcass that has not undergone rigor mortis and you suspect anthrax, take appropriate precautions and call your veterinarian, or animal health officials.

Animal Health and Food Safety Services

For additional information contact the Animal Health Branch at:

Phone: (916) 654-1447 Fax: (916) 653-2215

Or visit our website at <http://www.cdffa.ca.gov>



California Department of Food and Agriculture

Redding District:
Modesto District:
Tulare District:
Ontario District
USDA-VS Area Office

(530) 225-2140
(209) 491-9350
(559) 685-3500
(909) 947-4462
(916) 857-6170 (877) 741-3690